

PROJECT NUMBER: 0400  
PROJECT TITLE: Low Density Rod Development  
PROJECT LEADER: R. S. Mullins  
PERIOD COVERED: June, 1988

#### LOW DENSITY ROD

- A. **Objective:** Develop a continuous process for the production of reduced density cigarettes.
- B. **Results:** Analysis of data from the CV/OV/Size test indicated that the firmness of the bound rods was determined primarily by the density of the rods and the CV of the filler. The statistical analysis failed to show the size of the filler (%6 mesh) as being a significant factor in determining cigarette firmness. However, since the filler size and CV were highly correlated, this result cannot be considered conclusive.

Production of cigarette samples for puff x puff TPM analysis was completed. Cigarettes were made at normal and 25% reduced density using both normal cigarette paper and a low porosity paper. The low porosity paper was selected such that it will produce in the low density model approximately the same puff count as the normal density/normal paper model. In addition to these cigarette models, 30" long uncut rods in each configuration were also supplied to New Products. These 30" rods will be hand cut into 120 mm lengths and also tested for puff x puff TPM.

At the request of Flavor Development, a test has been designed to compare the effects of applying the aftercut before, during, and after the binder application, on the loss of aftercut components during the coating and cigarette making processes. A memo detailing the proposed test plan has been issued for review and comment. A follow-up to the small-scale casing study has also been planned. Low density samples will be made from filler produced in the large scale primary and coated with three potential casing systems--Marlboro and the two most promising candidates from the small-scale study. Production of the filler by Semiworks is tentatively scheduled for the week of July 18.

The motor for the overhead transfer belt has been received. The transfer belt assembly is currently being assembled and checked out in the machine shop prior to installation on the maker. Installation of the assembly is scheduled for mid-July.

- C. **Plans:** Conduct an extended maker run to identify any maker and/or process problems which do not manifest themselves in shorter runs. Install an overhead suction tape to transport the bound rod from the microwave cavity to the wrapping garniture. Produce low density cigarette samples for evaluation of possible casing systems and for testing of aftercut application techniques. Formulate recommendations for any additional work on foamed binder application.

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